

## **ENGINEERING TECHNICIAN**

**772**

**DEPARTMENT:** James City Service Authority/Engineering

### **NATURE OF WORK:**

Performs advanced technical, administrative, and computer-aided drafting for work of a complex and responsible engineering nature relating to the design, operations, and maintenance of the JCSA's water and wastewater systems.

Work involves the application of administrative and advanced technical skills to a variety of projects, programs and assignments. Furnishes technical assistance to the JCSA's Chief Engineer and assists other administrative and technical personnel with assignments being at or close to the professional level of responsibility and difficulty. Uses initiative, judgment, and technical competency in the development of assignments, the preparation of work programs, the oversight of computer-based systems and the design, review, and inspection of utility systems. Work is performed under the general supervision of the JCSA Chief Engineer.

### **ESSENTIAL FUNCTIONS OF THE JOB:**

Participates in all phases of infrastructure services, including technical oversight and computer applications; review of plans and specifications for compliance with rules, regulations, and standards; preparation of detailed cost estimates for utility programs and projects; and receives and responds to technical questions from engineers, contractors, County personnel and general public.

Participates in the collection of technical engineering data; performance of engineering computations; performs analysis of collected data; makes recommendations; and assists in the preparation of technical studies and reports.

Designs and drafts, either by computer or by manual methods, preliminary and final construction plans for utility projects.

Assists in managing the as-built records and filing systems.

Identifies and makes recommendations for revisions to the JCSA standards and specifications.

Sets bonds for the "Certificate to Construct" for water and wastewater systems.

Assists in coordinating with County departments and public agencies in the review of development plans.

Assists in the acceptance of utilities and facilities installed by developers and dedicated to JCSA.

Participates in all phases of field survey work; acquires data to be used in the preparation of plans for utility projects.

Maintains JCSA information in Geographic Information System.

Performs work safely in accordance with departmental safety procedures and the County Safety Program. Operates equipment safely and reports any unsafe work condition or practice to supervisor.

Performs related work as required.

#### **JOB LOCATION AND EQUIPMENT OPERATED:**

Duties are performed in an office and at various construction sites and facilities located throughout the County. Drives County vehicle to work sites. Requires extensive walking, frequently over rough terrain. Some duties are primarily performed outdoors in all weather conditions.

#### **REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES:**

Considerable knowledge of engineering, design, and construction methods, techniques and processes.

Considerable knowledge of computer aided drafting and mapping techniques, uses and procedures.

Considerable knowledge of the mathematical calculations used in the engineering and utility field.

Considerable knowledge of computer systems and computer assisted drafting technology.

Considerable knowledge of surveying and related computations.

Ability to use computer hardware and software for engineering, technical, administrative, and computer-aided drawing applications.

Ability to organize project assignments, to obtain and apply data, and to analyze and process such information.

Ability to coordinate work with others.

Ability to establish and maintain effective working relationships with co-workers, subordinates, County officials, consultants, contractors, and the general public.

Ability to communicate effectively, both orally and in writing; ability to perform technical writing.

Ability to perform taxing physical activity, including walking, climbing, stooping, bending, occasional field work and occasional lifting of supplies.

#### **MINIMUM QUALIFICATIONS:**

Graduation from high school and completion of a two-year college curriculum with an Associate's Degree in engineering, or a related field, supplemented by courses in computer aided drafting and computer systems; or any equivalent combination of training and experience which provides the above knowledge, skills, and abilities.

#### **NECESSARY SPECIAL QUALIFICATIONS:**

Must possess a valid Virginia driver's license and have an acceptable driving record based upon James City County's criteria. Must have considerable knowledge of computer aided drafting techniques.